**JOINT SESSION WITH URSI**
**9:00 A.M., Tuesday, 131 Hitchcock Hall**

# VERY-LONG-BASELINE INTERFEROMETRY EXPERIMENTS

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VLB observations have been made at many wavelengths from 2.8 to 270 cm. The highest resolution was obtained on the Greenbank-Crimea baseline, $2.9 \times 10^8$ wavelengths long at 2.8 cm, on which two quasars showed interference fringes. The observations between Goldstone, California and Canberra, Australia ($8.1 \times 10^7$ wavelengths at 13 cm) were the most sensitive, with a minimum detectable flux of 0.3 f.u. These gave fringes on 56 sources, and there are sufficient data to calibrate the interferometer and derive accurate positions, based on time delay and fringe rate. Typical accuracy is two seconds of arc. At 270 cm observations were made on the baselines Owens Valley-Greenbank-Arecibo. Three sources showed fringes. Preliminary values for the diameters are in rough agreement with values expected from the theory of interstellar scintillations.